EWS WELL-CAP

Environmental IoT Device

Overview

The EWS Well-Cap leverages the power and reliability of our Switch Data logger family to deliver a cost-effective, self-contained package for simplifying **Groundwater Monitoring.** Made from extremely robust glass filled nylon with a lockable hasp, the Switch device sits safely within the top section and can be easily configured via our Bluetooth mobile app. The Well-Cap offers hassle-free and quick installation, simply connect to the sensor, place over the monitoring bore and fix in place with lock screws. Different adapters allow it flexibility to fit to any bore diameter and the flip back lid provides easy access to the bore after install for pump sampling events or calibration dips.

Features

- Multi-Communicationsoptions; Send data via Satellite (Iridium, Swarm, Myriota) or 4GLTE.
- Reads SDI12, Modbus, 4-20mA, Pulse sensor protocols.
- Robust Glass-filled nylon material.
- Lockable hasp for added security
- External battery pack or solar options.
- Flip top lid for easy access to the bore.
- Sensor hanger to support the weight of the sensor cable.
- Fits standard 50mm or 120mm diameter bores.
- Adapters available for all bore sizes.
- Ultra-Low power draw with internal battery backup.
- Configure using Bluetooth mobile app (available on Apple and
- Android).
- Remotely change settings with two-way communications including via Iridium.
- Compact form factor, entire package: diameter 160mm x 180mm Rugged and robust for harsh environments - IP68.

Benefits

- Simplifies remote groundwater monitoring.
- Connects to all standard environmental sensors.
- Secure and lockable for deployments in public areas. Maintain
- easy access to the borehole.
- Compact and discreet, reducing installationtime and footprint.
- Designed and Manufactured in Australia.
- Ruggedand robust - deigned for harsh remote environments. Plug and play setup onsite.
- Very straightforward and scalable for fast deployments and large monitoring roll outs.
- Perfect for new and retrofit instrumentation projects.

RICE Earth Sciences

A DIVISION OF RICE RESOURCE TECHNOLOGIES

Specifications subject to change without notice.

MECHANICAL

Size	Diam 160 mm		Height 180 mm
Weight		900 g	

ENVIRONMENTAL

Operating Temperature	-20	-	60 °C
Storage Temperature	-40	-	65 °C
Humidity	5	-	95 % Rel

POWER

External Power Supply			
Input			
Input Voltage	12	24 V	
Input Current	700 mA		
Internal Battery (Rechargeable)			
Chemistry	Lion		
Terminal Voltage	6.8	7.8	8.4 V
Capacity	1.8/4.8 Ahr		
Internal Battery (Non-rechargeable)			
Chemistry	LiMnO2		
Terminal Voltage	6.8	7.8	8.4 V
Capacity 4.8 Ahr			
Sensor Power Output			
Output Voltage	11	12	13 V
Output Current	500 mA		
Digital Output			
Output Voltage	11	12	13
Output Current	500 mA		

STORAGE

Non-volatile-Log		
Size	4 MB	
Events	256000 Events	

CLOCK

RTC		
Accuracy (-10 to 70°C)	20	70 ppm
Network Time Sync Support		
Supported Networks	Iridium	Cellular

EXTERNAL SENSOR INPUTS

Serial - RS485 Modbus		
RTU		
Baud Rate	300	230400 Baud
Parity	N/E/O	
Serial – SDI12		
Analogue – 4-20mA	(2)	
Current Loop		
Accuracy	0.5 % f.s.	
Digital – Pulse Counter	(2)	
Input Voltage	1	5 V
Frequency	3 kHz	

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BUILT-IN SENSOR CHANNELS

Barometer – Pressure		
Range	10	1200 mbar
Accuracy 25°C, 750 mba	-1.5	+1.5 mbar
Barometer – Temperature		
Range	-40	85 °C
Accuracy	-0.8	+0.8 °C
Battery Voltage		
Supply Voltage		
Reference Voltage		
Radio Signal Strength		
Microprocessor		
Temperature		

TELEMETRY RADIO SUPPORT

Iridium	
Protocols	Short Burst Data
Coverage	Worldwide
4G Cellular LTE-M/NB-IOT	
Protocols	MQTT
Email	
Network Support	Telstra
Coverage	4 million Sqr km
Myriota	
Protocol	AWS Lambda
Coverage	Australia Wide
LoRaWAN	
Range to Gateway	10 Km

BLUETOOTH SUPPORT

Bluetooth Standard	5.0
Data Rate	2.5 kbps